

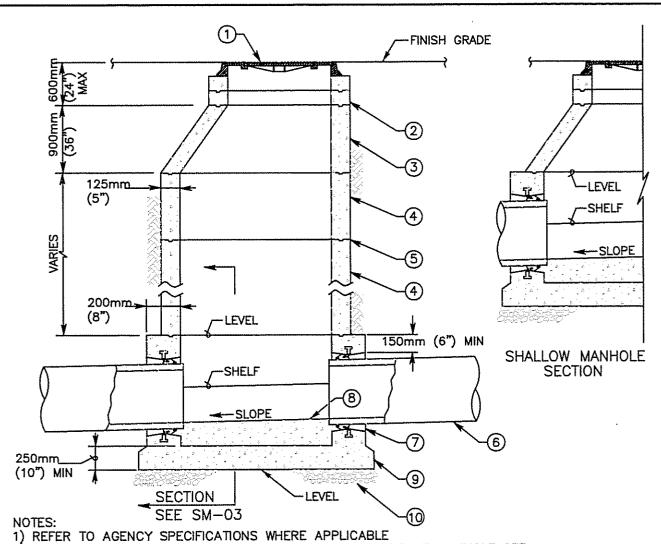
TYPE B SEWER LATERAL CLEANOUT

1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE

- 2) CLEANOUTS TO BE INSTALLED AT THE END OF MAINS WHERE INDICATED ON THE PLANS
- 3) CLEANOUT PIPE TO BE SAME SIZE AND MATERIAL AS SEWER MAIN UP TO

200mm (8")
4) BACKFILL TO TOP OF 45' BEND WITH 19mm (3/4") CRUSHED ROCK
5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

| ITEM NO | S | SIZE A | ND DESCRIPTION | ITEM NO | SIZE AND | DESCRIPTIO | N |
|----------------------------|------------------------------------|-----------------|--|--|---|------------------------------------|-------------------------------------|
| 1 | 300mm (12 MARKED 'S REQUIRED | 2") CI EWER' | CLEANOUT BOX COVER AND AGENCY NAME AS | (5) (6) | 45° ELBOW 19mm (3/4") CRUS BEDDING | SHED ROCK F | PIPE |
| ② ③ ④ | LONG (CLE | 2") PV ANOUT | 'C, C—900 x 380mm (15") BOX) LENGTH PVC PIPE | \\(\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | SEWER MAIN 19mm (3/4") CRUS STANDARD WYE BR INSTALL PLUG AND | ANCH | |
| Revision ORIGINAL | -' | | SAN DIEGO REGIONAL | . STAI | NDARD DRAWING | REGIONAL STAND | THE SAN DIEGO PARDS COMMITTEE |
| Add Metric Reploced S-C | T. Stanton | 03/03 | SEWER | CLEAN | OUT | Chairperson R.C.E DRAWING NUMBER | 03/24/2005 1 19246 Date SC-01 |



2) VERTICAL WALL OF CONE TO BE ON THE UPSTREAM SIDE OF MANHOLE SEE SM-05 FOR ACCESS LOCATIONS

3) FOR MANHOLE BASES SEE SM-03

4) MANHOLES FOR MAINS 450mm (18") AND LARGER SHALL BE COATED AND LINED PER SM-07

5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS

1200mm (48")

LEGEND ON PLANS

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|----------------------|--|--------------------|---|--------------------------------------|---|
| ITEM NO | SIZE A | ND DESCRIPTION | ITEM SIZE AND DESCRIPTION | | |
| ① ② ③ ④ | CONCENTRIC COV 900mm (36") DIA (6") TO 450mm ECCENTRIC CONE | • | (C) | FIELD INSTALLED CONCRETE BASE, PLACE | ONNECTOR SEE SM-04 INVERT SEE SM-04 PRECAST OR CAST IN 9mm (3/4") CRUSHED |
| Revision ORIGINAL | By Approved Date Kercheval 12/75 | SAN DIEGO REGIONAL | STANI | DARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |
| Add Metric | T. Stanton 03/03 | | | | Henton 03/24/2005 |

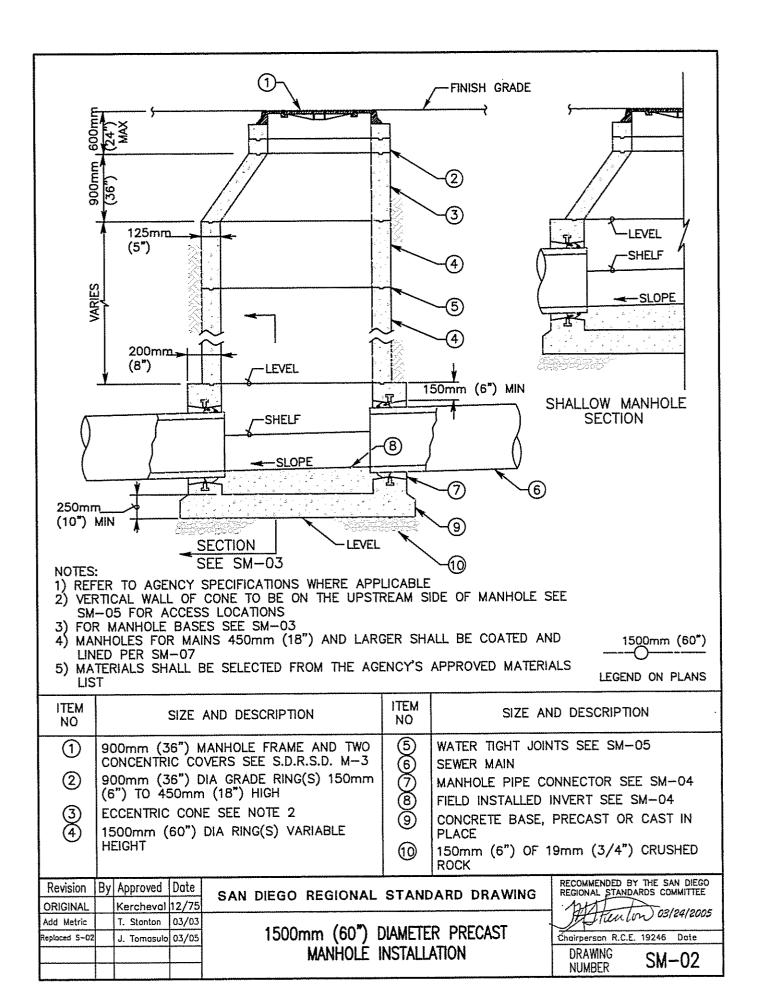
| Revision | Ву | Approved | Date | l |
|---------------|----|-------------|-------|---|
| ORIGINAL | | Kercheval | 12/75 | |
| Add Metric | | T. Stanton | 03/03 | |
| Replaced S-02 | | J. Tomasulo | 03/05 | |
| | | | | |
| | | | | 1 |

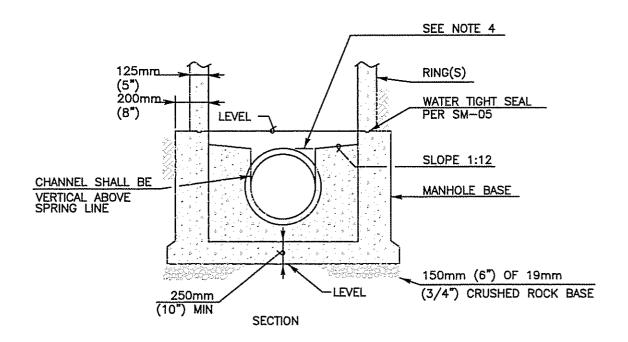
1200mm (48") DIAMETER PRECAST MANHOLE INSTALLATION

Chairperson R.C.E. 19246 Date

Drawing Number

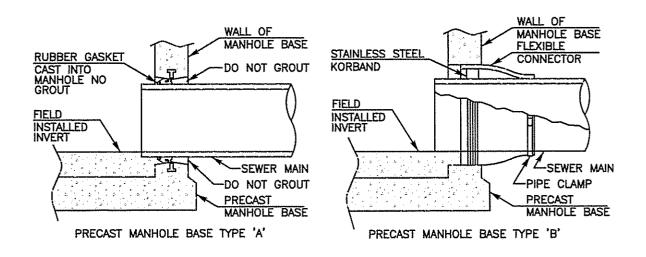
SM-01

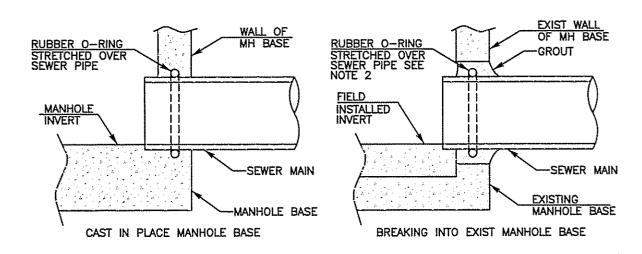




1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
2) FOR MANHOLE INSTALLATIONS SEE SM-01 AND SM-02
3) MANHOLE BASES FOR MAINS 450mm (18") AND LARGER SHALL BE COATED PER SM-07
4) LOWEST POINT ON SHELF SHALL BE EVEN WITH TOP OF PIPE
5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

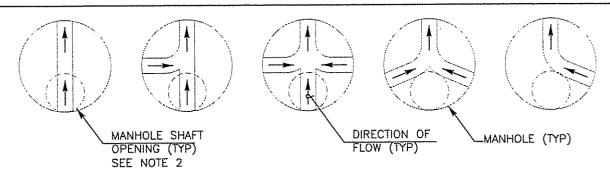
| | | | | | DRAWING SM-03 |
|---------------|----|-------------|-------|-------------------------------------|---|
| Replaced S-02 | | J. Tomasula | 03/05 | SEWER MANHOLE BASE | Chairperson R.C.E. 19246 Date |
| Add Metric | | T. Stanton | 03/03 | | 1 tunton 03/24/2005 |
| ORIGINAL | | Kercheval | 12/75 | SAN DIEGO REGIONAL STANDARD DRAWING | must A |
| Revision | Ву | Approved | Date | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |



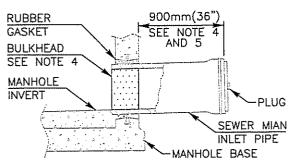


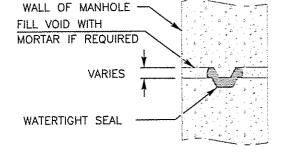
- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) A RUBBER O-RING OR A FLEXIBLE CONNECTOR (AS SHOWN IN PRECAST MANHOLE BASE TYPE 'B') CAN BE USED WHEN BREAKING INTO EXISTING MANHOLE
- 3) FOR MANHOLES REQUIRING COATING AND LINING SEE SM-07
- 4) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

| Revision | Ву | Approved | Date | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |
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| ORIGINAL | | Kercheval | 12/75 | SAN DIEGO REGIONAL STANDARD DRAWING | I do to the |
| Add Metric | | T. Stanton | 03/03 | | Hanton 03/24/2005 |
| Replaced S-02 | | J. Tomasulo | 03/05 | MANHOLE PIPE CONNECTORS | Chairperson R.C.E. 19246 Date |
| | | | | WANTOEL ? II E COMMECTOMO | DRAWING SM-04 |
| | | | | | NUMBER SM-U4 |



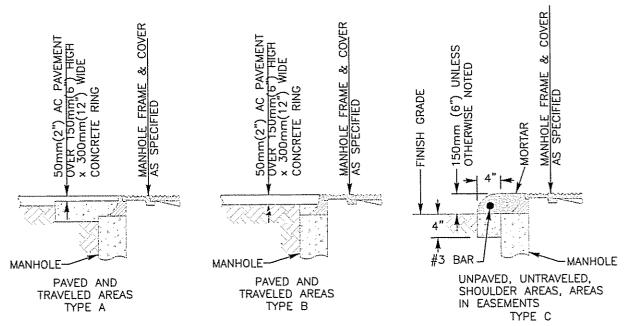
MANHOLE ACCESS LOCATION PLAN VIEW





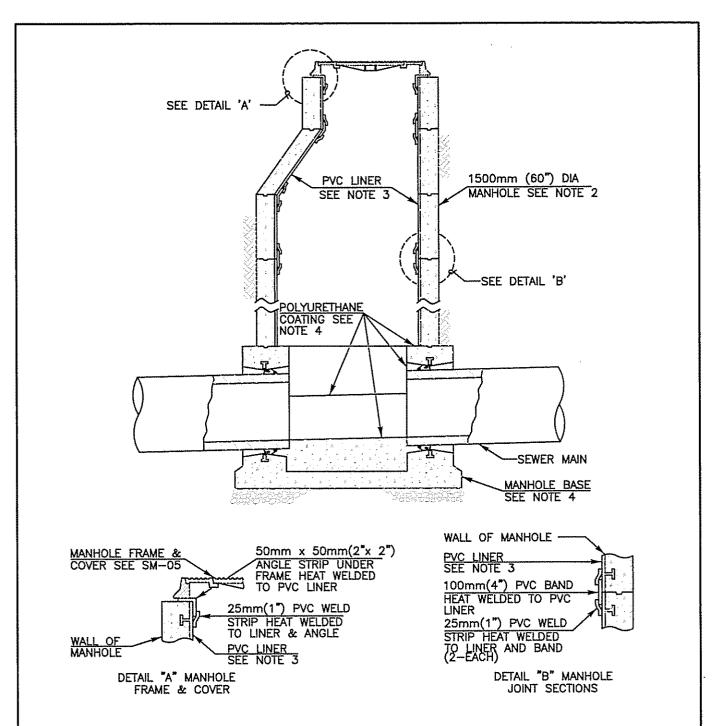
MANHOLE STUB OUT FOR FUTURE CONNECTION

WATERTIGHT MANHOLE JOINT



- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE 2) VERTICAL WALL OF CONE TO BE ON THE UP STREAM SIDE OF MANHOLE
- 3) FOR MANHOLES REQUIRING COATING AND LINING SEE SM-07
- 4) STUBS SHALL BE BULKHEADED AT THE MANHOLE END
- SEWER MAIN TO BE LAID WITH BELLS UP-GRADE
- 6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

| Revision | Ву | Approved | Date | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY REGIONAL STANDAR | |
|---------------|----|-------------|-------|-------------------------------------|---------------------------------|-------------|
| ORIGINAL | | Kercheval | 12/75 | | nut I | |
| Add Metric | | T. Stanton | 03/03 | MANUALE MICOELLANGOLIC | Atentor | 03/24/2005 |
| Replaced S-02 | | J. Tomasulo | 03/05 | MANUTULE MISCELLANEOUS | | |
| | | | | DETAILS | DRAWING NUMBER | SM-05 |
| | | | | | NUMBER | |



1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE

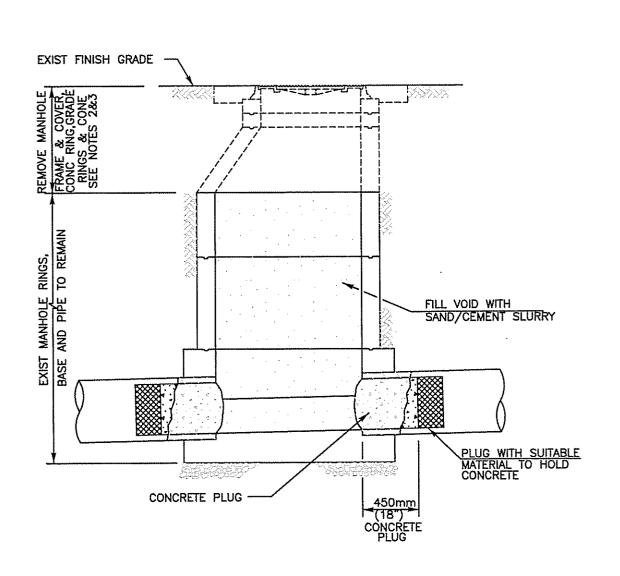
2) MANHOLES FOR SEWER MAINS 450mm(18") AND LARGER SHALL BE COATED AND LINED

3) MANHOLE SHAFT AND CONE SECTIONS, AND GRADE RINGS SHALL HAVE A PVC LINER PLACED WITH T-SHAPED SUPPORTS INTEGRALLY CAST INTO THE CONCRETE

4) ELASTOMERIC POLYURETHANE COATING SHALL BE APPLIED TO THE INTERIOR OF MANHOLE BASES

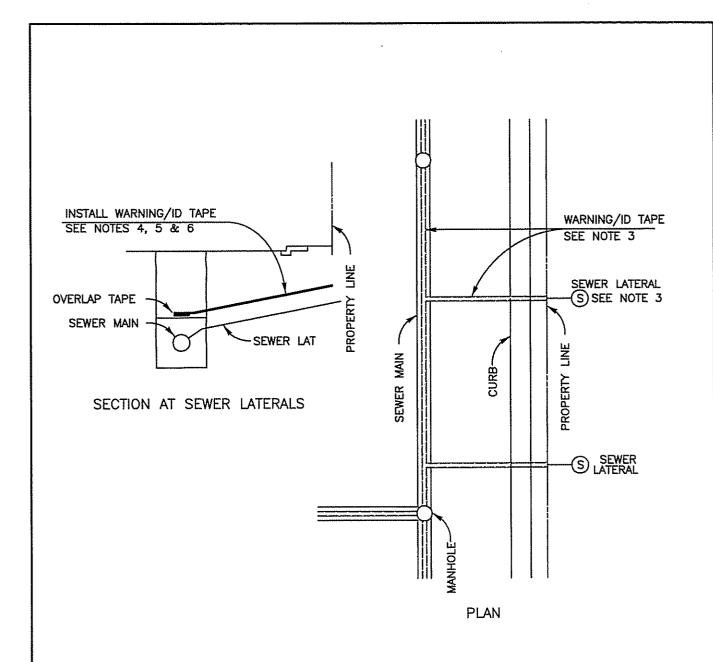
5) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

| | | | | LINING SYSTEM | DRAWING SM-07 |
|---------------|----|-------------|-------|-------------------------------------|---|
| Replaced 5-02 | | J. Tomasulo | 03/05 | | Chairperson R.C.E. 19246 Date |
| Add Metric | | T. Stanton | 03/03 | MANUAL CONTINO AND | Harton 03/24/2005 |
| ORIGINAL | | Kercheval | 12/75 | SAN DIEGO REGIONAL STANDARD DRAWING | do 1 of 1 |
| Revision | Ву | Approved | Date | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |



1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
2) ALL SALVAGED MATERIAL BECOMES PROPERTY OF AGENCY OF JURISDICTION
3) BACKFILL PER AGENCY'S REQUIREMENT
4) FOR CUTTING & PLUGGING ABANDONED SEWER MAINS SEE WP-03

| Add Metric Replaced 5-02 | T. Stanton J. Tamasula | | | | MANHOLE ONMENT | | Choirperson R.C.E. DRAWING NUMBER | |
|-----------------------------|---------------------------|------|-------|----------|-------------------|---------|-------------------------------------|---------------|
| ORIGINAL | Approved Kercheval | | DIEGO | REGIONAL | STANDARD | DRAWING | RECOMMENDED BY REGIONAL STANDA | RDS COMMITTEE |



1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE

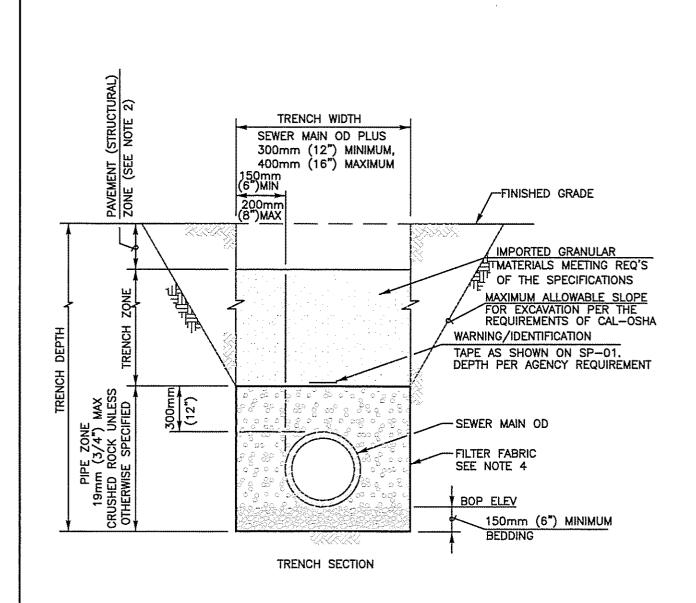
2) WARNING/IDENTIFICATION TAPE SHALL BE INSTALLED AS SPECIFIED BY AGENCY
3) STAMP OR CHISEL A 50mm (2") HIGH 'S' IN CURB FACE TO IDENTIFY SEWER LATERAL LOCATION

4) FOR SEWER LATERALS EXTEND TAPE TO PROPERTY LINE

5) DEPTH OF WARNING/IDENTIFICATION TAPE AS SPECIFIED BY AGENCY

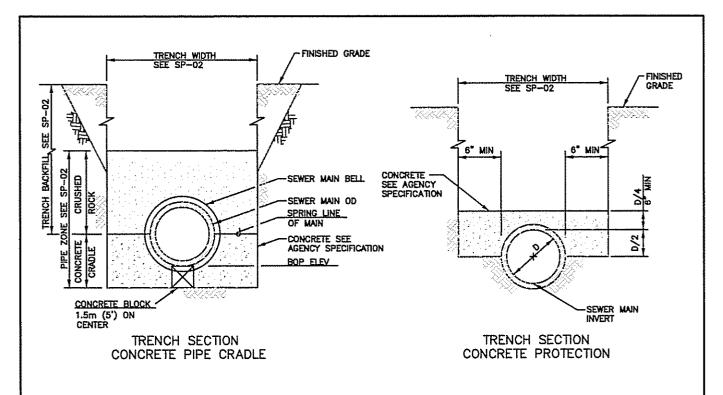
6) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

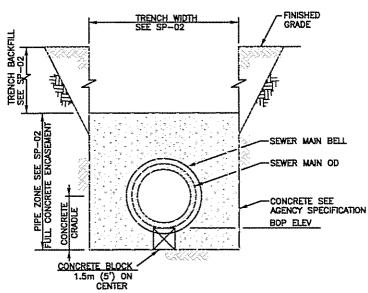
| | Approved | | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |
|------------------------|-----------------------------|--------------|-------------------------------------|---|
| ORIGINAL Add Metric | Kercheval T. Stanton | | | Atenton 03/24/2005 |
| Replaced S-19 | J. Tomosulo | 03/05 | WARNING ARRITMATION | Chairperson R.C.E. 19246 Date |
| | | | TAPE INSTALLATION | DRAWING SP-01 |



- 1) REFER TO AGENCY SPECIFICATIONS FOR TRENCHING, BACKFILLING AND COMPACTING WHERE APPLICABLE
- 2) PAVING OR PAVEMENT REPAIR TO BE DONE IN ACCORDANCE WITH AGENCY OF JURISDICTION
- 3) EXCAVATE BELL HOLES AT EACH JOINT TO PERMIT PROPER ASSEMBLY AND INSPECTION OF THE ENTIRE JOINT
- 4) FILTER FABRIC AS REQUIRED BY AGENCY OF JURISDICTION (WITH A MINIMUM 12" OVERLAP).

| Revision 1 | 3y Appro | ved Date | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |
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| ORIGINAL | Kerch | eval 12/75 | OTHE DECO REGIONAL OTHER DRAWING | MAT A |
| Add Metric | T. Stor | iton 03/03 | | Hanton 03/24/2005 |
| Replaced S-04 | J. Tom | asulo 03/05 | | Chairperson R.C.E. 19246 Date |
| | | | BACKFILL FOR SEWER FACILITIES | DRAWING SP-02 |
| | | | | NUMBER SI - UZ |

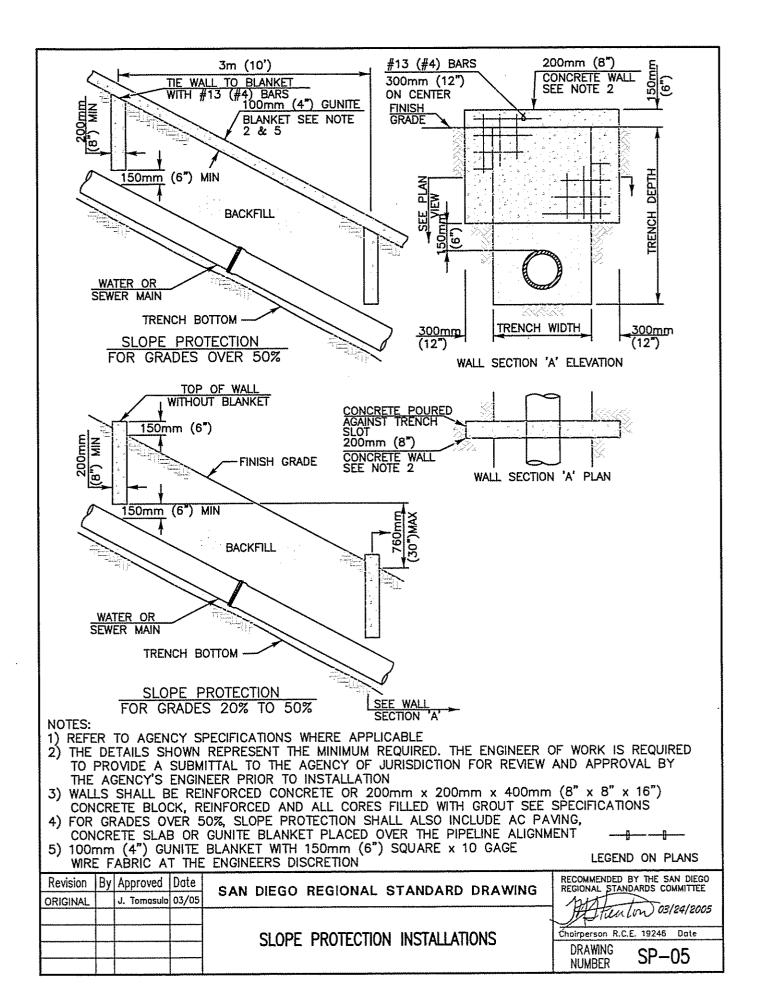


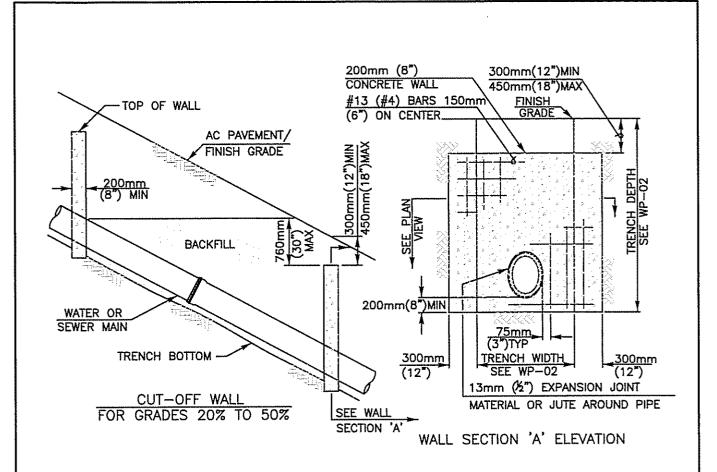


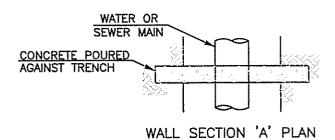
TRENCH SECTION CONCRETE PIPE ENCASEMENT

- 1) REFER TO AGENCY SPECIFICATIONS FOR TRENCHING, BACKFILLING AND COMPACTING WHERE APPLICABLE
- 2) CONCRETE CRADLE SHALL BE USED WHEN THE TRENCH WIDTH AT THE UPPER LIMIT OF THE PIPE ZONE EXCEEDS THE MAX WIDTH SPECIFIED ON SP-02 AND OR DIRECTED BY AGENCY'S ENGINEER
- 3) FOR PIPE BEDDING AND TRENCH BACKFILL SEE SP-02

| Revision ORIGINAL | Approved Kercheval | Date 12/75 | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |
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| Add Metric | T. Stanton | 03/03 | COMODETT DOCTTOTION FOR | Hentin 03/24/2005 |
| Replaced S-06 | J. Tomasulo | 03/05 | | Chairperson R.C.E. 19246 Date |
| | | | SEWER PIPE | DRAWING SP-03 |
| İ | | | | NUMBER 31-03 |







1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE

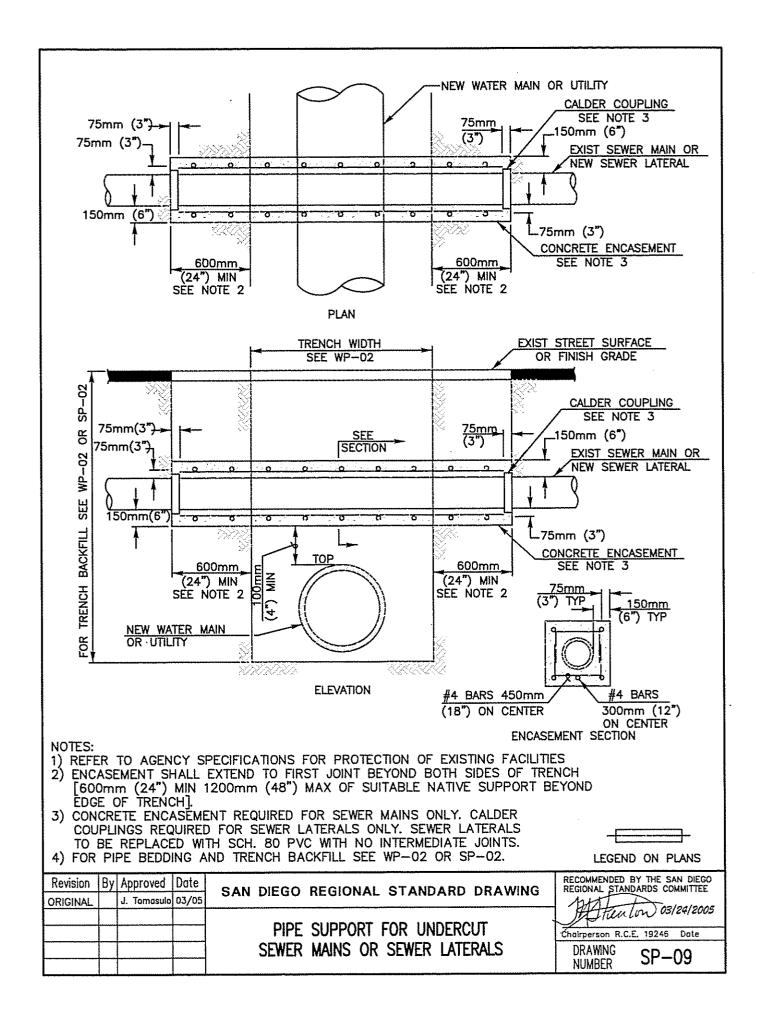
2) FOR USE AS TRENCH BACKFILL STABILIZATION IN TRAVELED AREAS

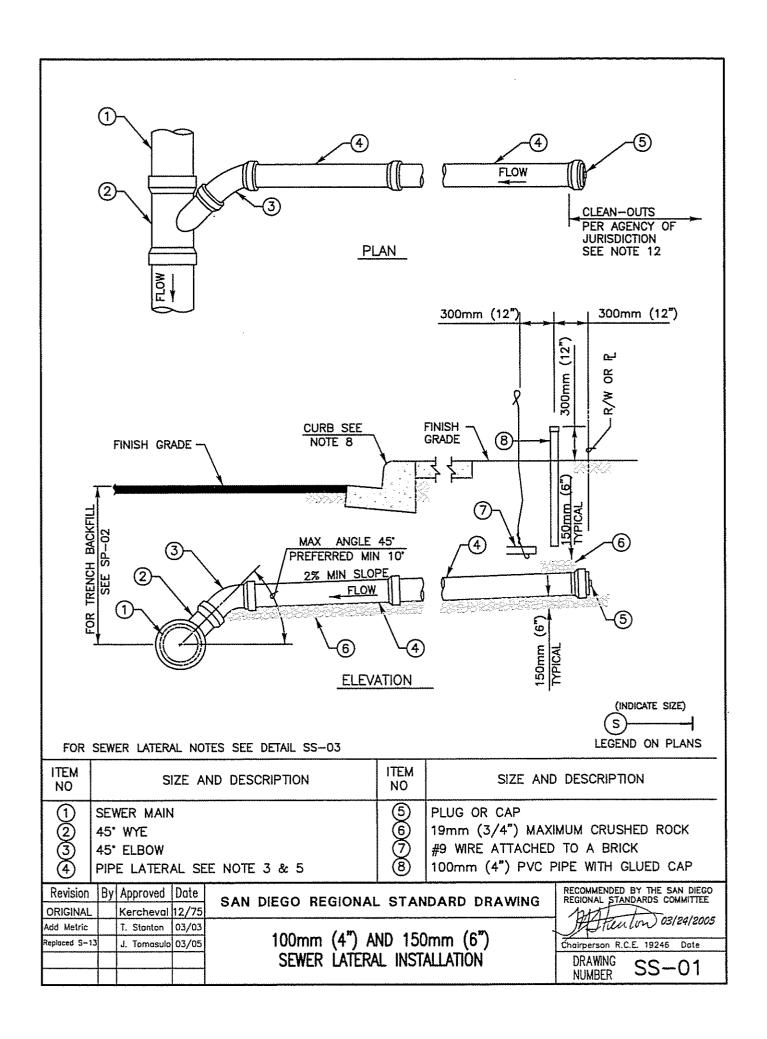
3) THE DETAILS SHOWN REPRESENT THE MINIMUM REQUIRED. THE ENGINEER OF WORK IS REQUIRED TO PROVIDE A SUBMITTAL TO THE AGENCY OF JURISDICTION FOR REVIEW AND APPROVAL BY THE AGENCY'S ENGINEER PRIOR TO INSTALLATION

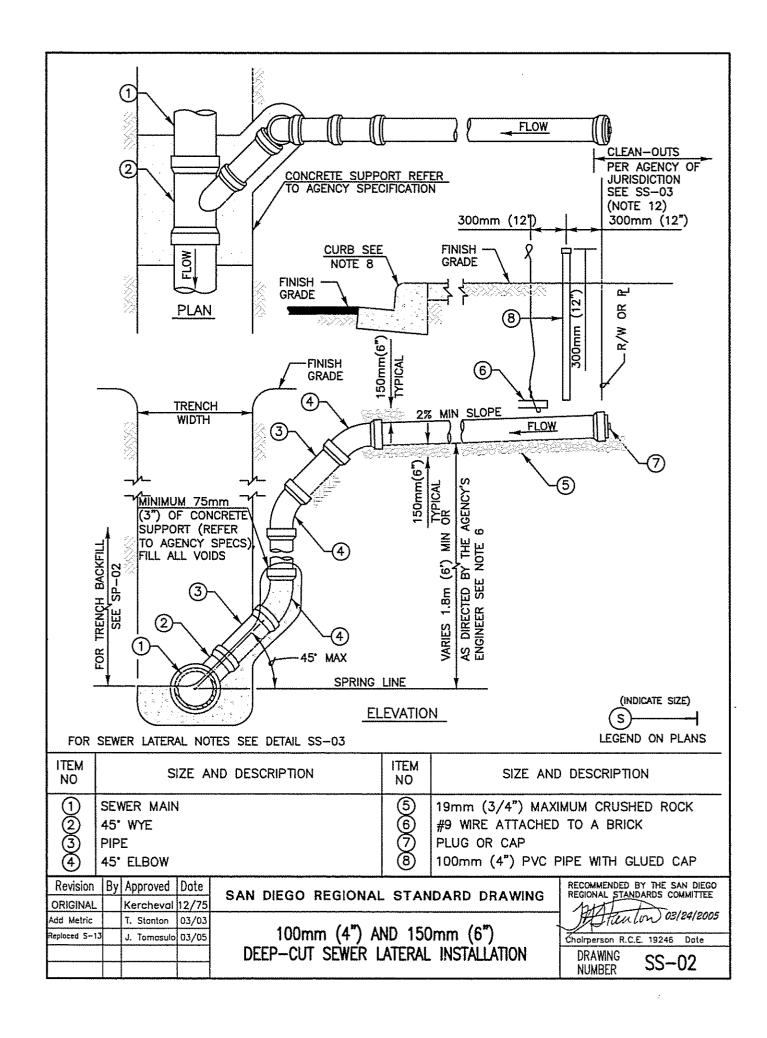
4) WALLS SHALL BE REINFORCED CONCRETE OR 200mm x 200mm x 400mm (8" x 8" x 16") CONCRETE BLOCK, REINFORCED AND ALL CORES FILLED WITH GROUT SEE SPECIFICATIONS

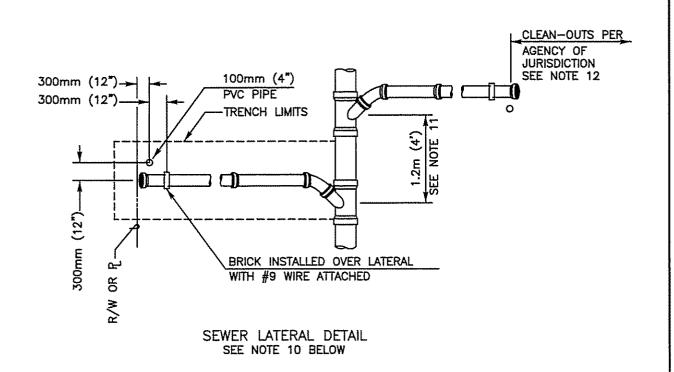
5) FOR GRADES OVER 50% SEE WP-05/SP-05

| Revision ORIGINAL | Ву | Approved J. Tomasula | -{ | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |
|-------------------|----|-----------------------|----|-------------------------------------|---|
| | | | | CUT-OFF WALL INSTALLATION IN | Thenton 03/24/2005 Chairperson R.C.E. 19246 Date |
| | | | | TRAVELED AREAS | DRAWING SP-07 |









- 1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE
- 2) IN NO CASE SHALL LATERAL CONNECT DIRECTLY ON TOP OF SEWER MAIN
- 3) LATERAL SHALL BE INSTALLED TO PROPERTY LINE UNLESS SPECIFIED ON PLANS
- 4) MINIMUM 1.2m (4') COVER ABOVE LATERAL AT PROPERTY LINE
- 5) LATERAL TO HAVÉ A MINIMUM SLOPE OF 2%
- 6) VERTICAL PIPE SHALL BE BRACED WHILE BACKFILLING TRENCH
- 7) INSTALL WARNING/IDENTIFICATION TAPE AS SHOWN ON SP-01
- 8) STAMP OR CHISEL A 50mm (2") HIGH "S" IN CURB FACE OVER LATERAL TO IDENTIFY SEWER LATERAL LOCATION
- 9) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST
- 10)FOR SEWER LATERAL INSTALLATIONS SEE SS-01 AND SS-02
- 11) FOR SEWERS SPECIFIED AS PVC PIPE, A MINIMUM 0.9m (3') SECTION OF PIPE IS REQUIRED BETWEEN FITTINGS
- 12)SEWER CLEAN-OUT SEE SC-01 TYPE B AS REQUIRED BY AGENCY OF JURISDICTION

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n By Approved Date

Revision By Approved Date
ORIGINAL Kercheval 12/75
Add Metric T. Stanton 03/03
Replaced S-13 J. Tomasulo 03/05

SAN DIEGO REGIONAL STANDARD DRAWING

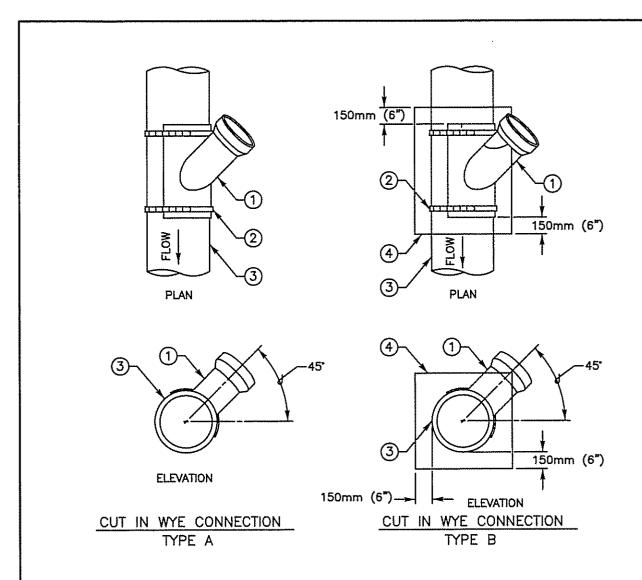
SEWER LATERAL NOTES AND DETAIL

RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE

ATTENTO 03/24/2005

Chairperson R.C.E. 19246 Date

DRAWING SS-03



1) REFER TO AGENCY SPECIFICATIONS WHERE APPLICABLE

- 2) CONNECTIONS TO EXISTING SEWER MAINS TO BE MADE BY AGENCY PERSONNEL IN ACCORDANCE WITH SPECIFICATIONS UNLESS OTHERWISE NOTED ON PLANS
- 3) IN NO CASE SHALL CONNECTION BE MADE DIRECTLY ON TOP OF SEWER MAIN
- 4) NO MORE THAN ONE CUT IN WYE WILL BE ALLOWED FOR EACH LENGTH OF EXISTING VCP SEWER MAIN
- 5) FOR SEWER LATERAL INSTALLATION SEE SS-01 AND SS-02
- 6) FOR TRENCH BACKFILL SEE SP-02
- 7) MATERIALS SHALL BE SELECTED FROM THE AGENCY'S APPROVED MATERIALS LIST

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| LEGEND | ON | PLANS |

/INDICATE CIZEN

| ITEM NO | SIZE AND DESCRIPTION | ITEM NO | SIZE AND DESCRIPTION |
|------------|--------------------------------------|------------|----------------------|
| 1 | 45' SADDLE WYE WITH GASKET | 3 | EXISTING SEWER MAIN |
| 2 | STAINLESS STEEL HOSE CLAMPS (2-EACH) | (4) | CONCRETE ENCASEMENT |

| | J 17 | 711111111111111111111111111111111111111 | ~ / Imh-h- | THOSE SETTING (2 ETIGIT) | |
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| Revision | Ву | Approved | Date | SAN DIEGO REGIONAL STANDARD DRAWING | RECOMMENDED BY THE SAN DIEGO REGIONAL STANDARDS COMMITTEE |
| ORIGINAL | | Kercheva | 12/75 | SAN DIEGO REGIONAL STANDARD DRAWING | |
| Add Metric | | T. Stanton | 03/03 | 400 (4 ^N) 1110 4E0 (0 ^N) 0EUED | Hauton 03/24/2005 |
| Replaced S-13 | 5 | J. Tomosul | 03/05 | \ | Chairperson R.C.E. 19246 Date |
| | | | | CUT-IN WYE CONNECTIONS | DRAWING SS-04 |
| | ĺ | | | | MOMPLY |